PATENT ABSTRACTS OF JAPAN

(11)Publication number : 02-059075

(43)Date of publication of application : 28.02.1990

(51)Int.Cl. B05D 7/24
B01D 67/00
B01D 71/74
B05D 1/20
G01N 27/327
G01N 33/544

(21)Application number : 63-211911

(22)Date of filing : 26.08.1988

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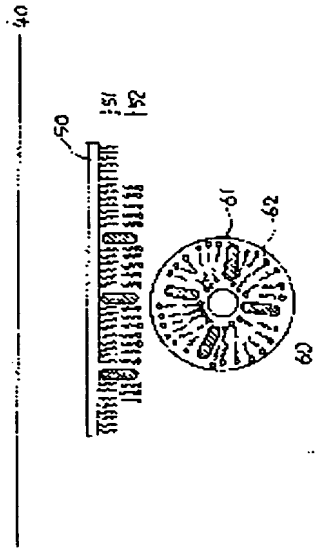
(54) FORMATION OF PLANAR MEMBRANE

(57)Abstract:

PURPOSE: To obtain a stable protein-lipid bimolecular membrane of good quality, in forming a biomembrane, by immersing a substrate having a long chain hydrocarbon group at least on one side surface thereof in a liposome suspension to form a protein-lipid bimolecular planar membrane.

CONSTITUTION: When a substrate 50 having a long chain hydrocarbon group at least on one side surface thereof is immersed in a suspension 60 of liposome or proteoliposome, liposome or proteoliposome is cloven not only at an air-liquid interface 40 but also at the interface with a long chain hydrocarbon group sequence molecular layer 51 to be developed to form a molecular film and a bimolecular planar membrane of a protein molecular 61 and a lipid molecule 62 is obtained. The substrate 50 having the long chain hydrocarbon group is constituted by bonding a long chain alkylsilane or long chain alkyltitanate coupling agent or bonding a polar group of lipid having a long fatty acid chain. By this method, a stable protein-lipid bimolecular planar membrane of good quality



having a large area can be easily obtained.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]